



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,801	11/15/2001	Kristian E. Johnsgard	14912.832	5951
21971	7590	08/17/2004	EXAMINER	
WILSON SONSINI GOODRICH & ROSATI 650 PAGE MILL ROAD PALO ALTO, CA 943041050			FASTOVSKY, LEONID M	
			ART UNIT	PAPER NUMBER
			3742	
DATE MAILED: 08/17/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/998,801	Applicant(s) JOHNSGARD ET AL.	
	Examiner Leonid M Fastovsky	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 15-17 and 22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yee et al (1,564,630).

Yee teaches a resistive heater (Fig. 1) comprising a doped ceramic element 1 containing nitrogen, and undoped ceramic material 3 comprising silicon carbide, wherein the coefficient of thermal expansion of the doped and undoped materials is the same as in the applicant invention because the chemical composition is identical.

Claims 15-17 and 22 are for intended use, however a recitation directed to the manner in which a claimed apparatus is intended to be used does not distinguish the claimed apparatus from the prior art because the prior art has a capability to so perform (See MPEP 2114 and Ex parte Masham, 2 USPQ2d 1647 (1987)). In addition, Yee teaches a structural similarity to the disclosed invention and is inherently capable of forming a monolithic plate as set forth in claim 15 (See MPEP 2131.01).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yee in view of Friese (6,582,669).

Yee teaches substantially the claimed feature, but does not specify the concentration of nitrogen in the doped ceramic heating element. Friese teaches a concentration between 2800 ppm and 1300 ppm. It would have been obvious to one having ordinary skill in the art to use the concentration of nitrogen in the heating element to maintain sufficient density of the ceramic heater, as taught by Friese.

5. Claims 19-21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee in view of Chen et al (6,646,235).

Yee teaches substantially the claimed features, but does not teach a susceptor and lifting pins. Chen teaches a susceptor 155 and lifting pins 195. It would have been obvious to one having ordinary skill in the art to use in the Yee apparatus the susceptor and lifting pins of Chen in order to support a substrate (Col. 6, lines 35-40).

6. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee in view of Hierholzer, Jr. et al (4,328,529).

Yee teaches substantially the claimed features, but does not teach that the ceramic heater comprises at least one of an aluminum oxide, boron nitride and silicon nitride,

Art Unit: 3742

boron, arsenic, antimony and phosphor. Hierholzer teaches a doped ceramic heater comprising boron, phosphorous, arsenic or antimony (Col. 5, lines 36-49). It would have been obvious to one having ordinary skill in the art to use boron or arsenic or phosphorous for use as a doping material in order to lower the resistivity of the ceramic as taught by Hierholzer, Jr, and thus the heating element, in cross-section, will be able to lie flat.

7. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee in view of Kahn et al (5,502,345).

Yee teaches substantially the claimed features including a thickness of the heater in a range of 0.05 inch, but does not teach a resistivity range. Kahn teaches a ceramic actuator with an inherent heating capability because of its resistivity and current carrying use (Col. 3, lines 45-48), with a first region of lower resistivity in contact with a second region of higher resistivity. It would have been obvious to one having ordinary skill in the art to increase a thickness of the heater from about 0.1 to about 0.3 inch as a matter of design choice, and to set the resistivity of the doped heating element from about 2 to about 5 orders of magnitude less than the resistivity of undoped heating element as suggested by Kahn, as a matter of design choice.

Response to Arguments


8. Applicant's arguments filed 7/17/04 have been fully considered but they are not persuasive. See the discussion above.

Art Unit: 3742

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid M Fastovsky whose telephone number is 703-306-5482. The examiner can normally be reached on M-Th. 8.00 am -6.00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 703-3055766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Leonid M Fastovsky
Examiner
Art Unit 3742

Imf